UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,672	07/21/2003	Andres C. Callegari	HESI.105843	5070

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EXAMINER
LUU, SY D

ART UNIT	PAPER NUMBER
2174	

DATE MAILED: 09/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/623,672	CALLEGARI, ANDRES C.
	Examiner	Art Unit	
	Sy D Luu	2174	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>10/25/03 and prior</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-60</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-60</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>10/25/03</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This communication is responsive to the Preliminary Amendment, filed on 8/29/03. This

action is Non-Final.

2.   Claims 1-60 are pending in this application. Claims 1, 24, 30, 37, 50, 56, and 60 are

independent claims. In the Preliminary Amendment, claims 1, 5, 7, 8-9, and 18-19 were

amended, and claims 20-60 were added.

Claim Rejections - 35 USC § 112

3.   Claims 1-60 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as

the invention.

The term "substantially reproduced" being recited in numerous claims is a relative term

and is not defined by the claim, which render the claim indefinite.   The specification does not

provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would

not be reasonably apprised of the scope of the invention. The usage of this term is vague and

fails to show positive assertiveness. Appropriate corrections are required.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
sale in this country, more than one year prior to the date of application for patent in the United States.

5.   Claims 1, 3-4, 12, 18-20, 24-26, 30-33, 37-38, 50-52, and 56-60 are rejected under 35 U.S.C. 102(b) as being anticipated by Applicant's Admitted Prior Art ("AAPA").

As per claims 1 and 12, AAPA teaches a method for the remote display of graphical data, the graphical data representing a three-dimensional model of an object, the method comprising the steps of:

rendering the graphical data on a server to form a projection view image, and processing the projection view image on a server graphics accelerator to produce a scaled-down image having a transmission size less than a transmission size of the projection view image (Specification; page 4, paragraph [0011]);

transmitting the scaled-down image from the server to a client, wherein the server and the client operate in a remote execution networking environment (Specification; page 2, paragraph [006]);

processing the scaled-down image on a client graphics accelerator to substantially reproduce the projection view image, and displaying the substantially reproduced projection view image on the client (Specification; page 5, paragraph [0011-0012]).

As per claim 3, AAPA teaches the scaled-down image to be transmitted from the server graphics accelerator to the client graphics accelerator through a network medium (Specification; page 2, paragraph [006]; *inherent step for the client graphics accelerator to properly process the graphics data*).

As per claim 4, AAPA teaches the projection view image to be substantially reproduced on the client graphics accelerator by scaling the scaled-down image to increase the transmission size of the scaled-down image (Specification; page 5, paragraph [0011]).

As per claims 18-19, AAPA teaches the step of compressing the scaled-down image on the server to further reduce the transmission size of the scaled-down image, and retrieving information from the client graphics accelerator to reformat the scaled-down image into the native processing format of the client (Specification; pages 4-5, paragraphs [0011-0012]).

Claim 20 is similar in scope to claim 1, except that it merely repeat the same step with a new image. Thus, claim 20 would be rejected under similar rationale.

Claims 24-26 are similar in scope to claims 1-2 and 20 respectively, and are therefore rejected under similar rationale.

Claims 30-31 are similar in scope to claim 1, and are therefore rejected under similar rationale.

Claims 32-33, and 37-38 are similar in scope to claims 4-5, 1 and 20 respectively, and are therefore rejected under similar rationale.

Claims 50-52 are similar in scope to claims 24-26 respectively, and are therefore rejected under similar rationale.

Claims 56-60 are similar in scope to claims 30-33 and 38 respectively, and are therefore rejected under similar rationale.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7.   Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's

Admitted Prior Art ("AAPA") in view of Shuping et al. ("Shuping", US 6,313,855 B1).

As per claim 2, AAPA teaches processing the projection view image on the server

graphics accelerator to comprise the steps of:

reformatting the projection view image into a native processing format of the server,

binding the reformatted projection view image into a texture memory to form a texture map

(Specification, page 2, para [005-007]); and

reformatting the scaled-down image into a native processing format of the client

(Specification, page 2, para [0011-0012]).

AAPA does not teach the step of applying the texture map to a polygon having a

predetermined scaling factor to form the scaled-down image. However, such a step is well

known in the art. For instance, Shuping teaches a method for rendering images, thumbnail

images are mapped according to predetermined texture mapping (col. 11, lines 40-45). It would

have been obvious to an artisan at the time of the invention to combine Shuping's teaching with

AAPA in order to reduce image distortion.

8.   Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's

Admitted Prior Art ("AAPA") in view of Yagishita et al. ("Yagishita", US 2003/012881 A1).

As per claim 5, AAPA does not teach the substantially reproduced projection view image

to be displayed on the client to a user using adaptive resolution. However, the use of adaptive

resolution is well known in the art. For instance, Yagishita teaches an image data encoding

apparatus, wherein an image is displayed using adaptive resolution (page 2, para [0024]). It would have been obvious to an artisan at the time of the invention to combine Yagishita's teaching with AAPA's method so that the user can quickly recognize the contents of the received image and potentially could save the cost for transmission if it's not the desired one (page 1, para [006]).

As per claim 6, Yagishita's adaptive resolution adaptive resolution to comprise adaptively setting end resolution from lossy to lossless factors (figs 7A-7C).

9.   Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art ("AAPA"), Yagishita et al. ("Yagishita", US 2003/012881 A1) in view of Taha et al. ("Taha", US 20030083581 A1).

As per claim 7, AAPA-Yagishita teach all of the limitations as applied to claim 6, but does not teach the substantially reproduced projection view image to be displayed using lossy factors while the graphical data is being manipulated. However, the use of lossy factors in manipulation data is well known in the art. For instance, Taha teaches a method for graphical data manipulation in which the graphical data is manipulated using lossy factors (page 4; claim 18). It would have been obvious to an artisan at the time of the invention to include Taha's teaching with the method of AAPA-Yagishita in order to provide additional compression efficiency if required.

10.   Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's

Admitted Prior Art ("AAPA"), Yagishita et al. ("Yagishita", US 2003/012881 A1) in view of

Nakayama et al. ("Nakayama", US 6,560,365 B1).

As per claim 8, AAPA teaches all of the limitations as applied to claim 6, but does not

teach the substantially reproduced projection view image to be displayed using lossless factors

while the graphical data is stationary. However, the use of lossless factors while graphical data is

stationary is well known in the art. For instance, Nakayama discloses a method for decoding

compressed image data, wherein the image is displayed using lossless factors while the image is

stationary/static (col. 1, lines 11-17). It would have been obvious to an artisan at the time of the

invention to include Nakayama's teaching with the method of AAPA-Nakayama in order to

prevent deterioration of image quality.

As per claim 9, AAPA teaches the substantially reproduced projection view image to be

displayed in a one-to-one pixel resolution (page 5, para [0012]; *one-to-one pixel resolution*

would occur when the image is enlarged to the original size at the client).

Claims 10-11, 13-17, 21-23, 27-29, 34-36, 39-43, and 53-55 are rejected under 35 U.S.C. 103(a)

as being unpatentable over Applicant's Admitted Prior Art ("AAPA").

As per claims 10-11, and 13-17, AAPA does not explicitly disclose the claim limitations.

However, Offcial Notice is taken that all claim limitations regarding the server/client functions

and the manner of client/server connections as recited are well known in the art. It would have

been obvious to an artisan at the time of the invention to include such arrangement with the

method of AAPA in order to provide efficient means for organizing client/server connectability

and functionality.

As per claims 21-23, AAPA discloses the step of transmitting data to the client for enabling a user to manipulate the graphical data as the substantially reproduced new projection view image is displayed, (Specification; page 3, paragraph [009] and page 5, para [0011-0012]). AAPA does not expressly disclose the transmitting data to include protocols, wherein the protocols comprise window protocol calls as well as user interface information. However, the transmission of protocols from a server to the associated client is well known in the art. It would have been obvious to an artisan at the time of the invention to include such a step with AAPA so that image information as well as instruction for image handling would be provided to the client for proper processing.

Claims 27-29 are similar in scope to claims 21-23 respectively, and are therefore rejected under similar rationale.

Claims 34-36 are similar in scope to claims 21-23 respectively, and are therefore rejected under similar rationale.

Claims 39-41 are similar in scope to claims 21-23 respectively, and are therefore rejected under similar rationale.

Claims 42-43 and 45-49 are similar in scope to claims 10-11 and 13-17 respectively, and are therefore rejected under similar rationale.

Claims 53-55 are similar in scope to claims 27-29 respectively, and are therefore rejected under similar rationale.

Inquires

11.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sy Luu whose telephone number is **(703) 305-0409**. The examiner can normally be reached on Monday - Thursday from 7:00 am to 4:30 pm (EST). The examiner can also be reached on alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid, can be reached on (703) 308-0640.

The fax number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

SY D. LUU
PRIMARY EXAMINER